GAS TURBINE ENGINE WITH VARIABLE PRESSURE RATIO FAN SYSTEM

ABSTRACT

A multiple bypass turbofan engine includes axially spaced-apart first and second stage fans of the engine fan connected in driving engagement to a low pressure shaft. A fan bypass duct circumscribes the second stage fan. A first bypass inlet to the fan bypass duct is disposed axially between the first and second stage fans and a second bypass inlet is axially disposed between the second stage fan and an annular core engine inlet. A fan shroud divides the second stage fan blades into radially inner and outer fan hub and tip sections, respectively. The tip sections are radially disposed in a fan tip duct. An axially translatable deflector is positioned to close the fan tip duct when it opens the first bypass inlet and open the fan tip duct when it closes the first bypass inlet.